

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 July 2001 (26.07.2001)

PCT

(10) International Publication Number
WO 01/54145 A1

(51) International Patent Classification⁷: **H01F 1/00**,
10/00, 41/30

(21) International Application Number: **PCT/JP01/00437**

(22) International Filing Date: 24 January 2001 (24.01.2001)

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:
2000-52507 24 January 2000 (24.01.2000) **JP**

(71) Applicant (for all designated States except US): **TOKIN CORPORATION [JP/JP]**; 7-1, Koriyama 6-chome, Taihaku-ku, Sendai-shi, Miyagi 982-8510 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YOSHIDA, Shigeyoshi [JP/JP]**; c/o TOKIN CORPORATION, 7-1, Koriyama 6-chome, Taihaku-ku, Sendai-shi, Miyagi 982-8510 (JP). **ONO, Hiroshi [JP/JP]**; c/o TOKIN CORPORATION, 7-1, Koriyama 6-chome, Taihaku-ku,

Sendai-shi, Miyagi 982-8510 (JP). **ANDOH, Shinsuke [JP/JP]**; c/o TOKIN CORPORATION, 7-1, Koriyama 6-chome, Taihaku-ku, Sendai-shi, Miyagi 982-8510 (JP). **LI, Wei-Dong [CN/JP]**; c/o TOKIN CORPORATION, 7-1, Koriyama 6-chome, Taihaku-ku, Sendai-shi, Miyagi 982-8510 (JP). **SHIMADA, Yutaka [JP/JP]**; 37-10, Sakuragaoka 7-chome, Aoba-ku, Sendai-shi, Miyagi 981-0961 (JP).

(74) Agents: **GOTO, Yosuke et al.**; The Third Mori Building, 4-10, Nishishinbashi 1-chome, Minato-ku, Tokyo 105-0003 (JP).

(81) Designated States (national): **CN, KR, NO, SG, US.**

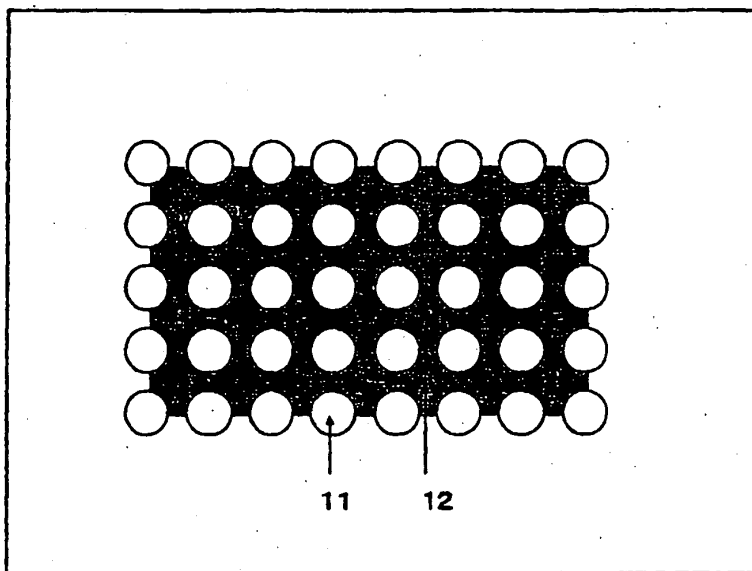
(84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **MAGNETIC SUBSTANCE WITH MAXIMUM COMPLEX PERMEABILITY IN QUASI-MICROWAVE BAND AND METHOD FOR PRODUCTION OF THE SAME**



(57) Abstract: A magnetic substance having the maximum value of complex permeability in quasi-microwave range is provided for suppressing a high frequency noise in a small-sized electronic apparatus. The magnetic substance is of a magnetic composition comprising M, X and Y, where M is a metallic magnetic material consisting of Fe, Co, and/or Ni, X being element or elements other than M and Y, and Y being F, N, and/or O. The M-X-Y magnetic composition has a concentration of M in the composition so that said M-X-Y magnetic composition has a saturation magnetization of 35-80 % of that of the metallic bulk of magnetic material comprising M alone. The magnetic composition has the maximum μ''_{\max} of complex

WO 01/54145 A1

permeability μ'' in a frequency range of 0.1-10 gigahertz (GHz).